

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-8 (cancelled).

Claim 9 (original). A method of assembling a shaft, comprising:
providing an annular first end shaft comprising a first alloy;
providing an annular first transition piece, said first transition piece having a first end layer comprising said first alloy, a second end layer comprising a second alloy, and a barrier layer disposed between said first end layer and said second end layer;

inertia friction welding said first end shaft to said first end layer of said first transition piece to form a first subassembly;

heat treating said first subassembly;

providing an annular mid shaft having first and second ends, said mid shaft made from a metal matrix composite material comprising said second alloy; and

inertia friction welding said first end of said mid shaft to said second end layer of said first transition piece.

Claim 10 (original). The method of assembling a shaft of claim 9 further comprising:

providing an annular second end shaft comprising said second alloy; and

inertia friction welding said second shaft to said forward end of said mid shaft.

Claim 11 (original). The method of assembling a shaft of claim 9 further comprising:

providing an annular second end shaft comprising said first alloy;
providing an annular second transition piece, said second transition piece having a first end layer comprising said first alloy, a second end layer comprising said second alloy, and a barrier layer disposed between said first end layer and said second end layer;

inertia friction welding said second end shaft to said first end layer of said second transition piece to form a second subassembly;

heat treating said second subassembly; and

inertia friction welding said second subassembly to said second end of said mid shaft.

Claim 12 (original). The method of assembling a shaft of claim 9 wherein said first alloy is a nickel-based alloy.

Claim 13 (original). The method of assembling a shaft of claim 9 wherein said second alloy is a titanium-based alloy.

Claim 14 (original). The method of assembling a shaft of claim 9 wherein said first transition piece includes a central web having at least one slot formed therethrough, and wherein said step of inertia friction welding said first end shaft to said first end layer of said first transition piece includes restraining said first transition piece from rotation using at least one key, said key being disposed in said slot and attached to a tailstock of an inertia friction welding machine.

Claim 15 (original). The method of assembling a shaft of claim 11 wherein said second transition piece includes a central web having at least one slot formed therethrough, and wherein said step of inertia friction welding said

second end shaft to said first end layer of said second transition piece includes restraining said second transition piece from rotation using at least one key, said key being disposed in said slot and attached to a tailstock of an inertia friction welding machine.